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Claims

1. Method of packaging a thick but malleable frozen dessert, and for dispensing it under pressure in the expanded state, in which method the product is placed in a container equipped with a dispensing member, then, after having put the said dispensing member in the closed position, the said container is pressurized by a propellant gas to a pressure high enough to ensure suitable dispensing, given the consistency of the product to be dispensed and characteristics of the dispensing member, characterized in that:

- a) a propellant gas which is virtually insoluble in the product to be dispensed is chosen;
- b) an expansion gas which is different from the propellant gas and highly soluble in the product to be dispensed is chosen in order to expand the product when it is dispensed, the amount of expansion gas used being defined depending on the degree of expansion desired on dispensing, the expansion gas being homogeneously dissolved in the product to be dispensed by putting the expansion gas in contact with the said product in a freezer and
- c) the passage of the said product takes place in the pasty state then it is dispensed by opening the dispensing member, the said product being expanded to the desired degree, determined prior to filling, as described in step 1b, by expanding the expansion gas which is completely dissolved therein.

2. Method according to Claim 1, in which an ice-cream mix is treated in a freezer which is supplied with expansion gas so as to partially freeze and expand the said mix, under temperature and pressure conditions promoting good dissolution of the expansion gas in the said mix, especially at a temperature of about -8°C to -12°C at the output and at a constant pressure equal to

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atmospheric pressure up to 10 bars above atmospheric pressure in the freezer.

3. Method according to Claim 1, in which a gas that
5 is highly soluble in the mix, preferably chosen from nitrous oxide (N_2O) and carbon dioxide, is used as an expansion gas.

10 4. Method according to Claim 1, in which nitrogen (N_2) or compressed air having a dewpoint less than the minimum temperature to which the container will be subjected between manufacture of the product and its use is used as propellant gas.

15 5. Method according to one of Claims 1, 2, 3 and 4, in which the partly frozen and partly expanded mix is placed in the container by means of a metering device ensuring the pressure is kept as close as possible to the initial pressure in the freezer, in the pipes and
20 in the metering unit, especially by exerting a counterpressure as close as possible upstream from the metering nozzle, so as to limit the expansion of the volume of the product during filling by partial expansion of the expansion gas.

25 6. Method according to one of Claims 1, 2, 3 and 4, in which a metering nozzle moving with an up and down movement is used as filling device, allowing filling by rising from the bottom of the container, of the type
30 called "bottom-up filler", so as to optimize the filling and to prevent the formation of pockets free of product.

35 7. Method according to Claim 1, in which the container is filled sufficiently quickly before expansion occurs or, alternatively, hermetically under pressure.

8. Method according to one of Claims 1, 2, 3 and 4,

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in which the container is filled through the dispensing member, the piston then being positioned just under the dispensing member.

5 9. Method according to one of Claims 1, 2, 3 and 4, in which a rigid receptacle is used as container, into which, on the one hand, the product to be packaged which contains the amount of expansion gas needed to
10 product is introduced, and, on the other hand, the propellant gas is introduced at the pressure desired for the dispensing.

15 10. Method according to Claim 9, in which a flexible pouch (8) defining a volume connected to the dispensing member (3) is used as container, which pouch is placed in a rigid receptacle (1), to which the dispensing member (3) associated with the pouch (8) is fastened, and the propellant gas is injected into the said
20 receptacle (1), outside the pouch (8), the product to be dispensed being introduced into the pouch (8).

25 11. Method according to Claim 9, in which a rigid cylindrical receptacle (1) is used as container, in which receptacle a sliding piston (5) is placed, which divides the receptacle (1) into two compartments, one of which is closed by the dispensing member (3) while the other has a valve (4) enabling the propellant gas to be injected, the product to be dispensed being
30 introduced into the receptacle (1) from the side of the compartment closed by the dispensing member (3).

35 12. Method according to one of Claims 1 to 11, in which the temperature of the product is lowered to a value below -10°C , preferably of from -15°C to -20°C so that it takes on its packaging consistency, and it is stored and used by the consumer at this temperature.